Turbo FRMAC

Radiological Dose Assessment

Turbo FRMAC

The Turbo FRMAC analysis tool performs complex calculations to quickly evaluate radiological hazards during an emergency response by assessing impacts to the public, workers, and the food supply. Turbo FRMAC can be used to evaluate the hazard from a wide variety of radiological incidents, such as:

- Radiological Dispersal Devices (RDDs)
- Nuclear Power Plant Emergencies
- Fuel Handling Accidents
- Transportation Accidents
- Nuclear Detonations

Turbo FRMAC calculations are based on methods established by the Federal Radiological Monitoring and Assessment Center (FRMAC). These interagency consensus methods are specified in the FRMAC Assessment Manual. FRMAC is a multi-agency group made up of radiological experts from U.S. Federal and State stakeholders, including:

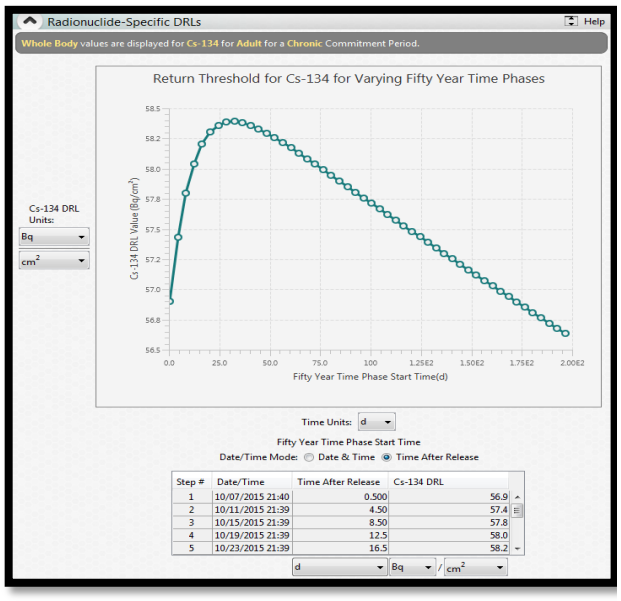
- Department of Energy /National Nuclear Security Administration
- Department of Homeland Security
- Environment Protection Agency
- Department of Agriculture
- Food and Drug Administration
- Department of Defense
- Centers for Disease Control and Prevention

Turbo FRMAC evaluations can be used to support Protective Action Decisions, such as:

- What field measurements would indicate that a Protective Action is warranted?
- Should a population be sheltered, evacuated or relocated?
- When can a relocated population return home?
- Might a food crop in an area need to be considered for removal from commerce?
- When can a crop be planted so as to not exceed food contamination guidelines.
- Should livestock be placed on stored feed?
- How long can a worker remain in a contaminated area?

Turbo FRMAC is pre-populated with default settings for many of the required calculation inputs. However, settings can be customized based on specific situations or regulations. The Turbo FRMAC Software suite includes the Radionuclide Viewer and Mixture Manager tools.

- Radionuclide Viewer provides ICRP 30- and ICRP 60-based radiological data such as dose coefficients and decay chain information for over 1200 radionuclides.
- Mixture manager allows users to create, share, and store radionuclide mixtures for future use as well as being preloaded with a wide variety of default mixtures for various release scenarios.



Sandia National Laboratories leads the development of Turbo FRMAC for the Department of Energy/National Nuclear Security Administration's Emergency Response Program.

Turbo FRMAC is available to the international emergency response community upon request through Sandia National Laboratories' Nuclear Incident Response Program at: https://nirp.sandia.gov

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